



Attorney Docket No. 63049.000092  
Attorney Customer No. 27682

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:	)	
	)	
Ronald D. BLUM et al.	)	Group Art Unit: 2873
	)	
Application Number: 10/627,828	)	Examiner: Unassigned
	)	
Filed: July 25, 2003	)	
	)	
Title: SYSTEM, APPARATUS AND	)	
METHOD FOR CORRECTING	)	
VISION USING AN ELECTRO-	)	
ACTIVE LENS	)	

**INFORMATION DISCLOSURE STATEMENT**  
**TRANSMITTAL LETTER**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Enclosed is an Information Disclosure Statement, accompanying form PTO-1449, and copies of references in connection with the above-identified patent application.

- ☒ [ X ] No additional fee for submission of an IDS is required.
- ☐ [ ] The fee of \$180.00 as set forth in 37 C.F.R. §1.17(p) is also enclosed.
- ☐ [ ] A certification under 37 C.F.R. §1.97(e) is also enclosed.
- ☐ [ ] A certification under 37 C.F.R. §1.97(e), a petition requesting consideration of the information disclosure statement, and the petition fee of \$130.00 as set forth in 37 C.F.R. §1.17(i) are also enclosed.
- ☐ [ ] Charge \$\_\_\_\_\_ to Deposit Account No. 08-3436 for the fee due.
- ☒ [ X ] A Mail Certificate Under 37 C.F.R. §1.8.


[ X ] A self-addressed stamped return postcard.

The Commissioner is hereby authorized to charge any appropriate fees that may be required by  
this paper to Deposit Account No. 08-3436.

Date: February 11, 2004

Respectfully submitted,

HUNTON & WILLIAMS  
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Registration No. 50,311



Attorney Docket No. 63049.000092

Customer No. 27682

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re US Patent Application of:

Ronald D. Blum et al.

Application No.: 10/627,828

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Title: SYSTEM, APPARATUS AND  
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ACTIVE LENS

Group Art Unit: 2873

Examiner: Unassigned

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Sir:

Attached hereto is a duly completed Form PTO-1449 listing references which may be considered either material or helpful to the examination of the above-identified patent application. Pages 1-7 of Form PTO-1449 list references which were submitted in the priority applications and consequently duplicate copies of these references are not attached hereto. Copies of the references found on pages 8-10 and not previously of record are enclosed for the Examiner's review. It is requested that all these references be considered by the Examiner and officially made of record.

Date: February 11, 2004

**Hunton & Williams**  
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951 East Byrd Street  
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(804) 788-8516 telephone number  
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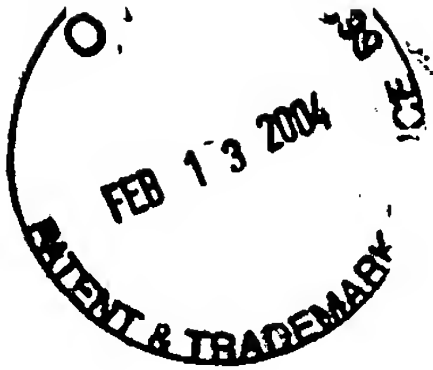
Respectfully submitted,

By:

Shawn K. Leppo  
Registration No. 50,311



<b>Form PTO-1449</b> U.S. Department of Commerce (Rev. 8-83) Patent and Trademark Office		Atty. Docket No.: 63049.000092		Application No.: 10/627,828			
<b>INFORMATION DISCLOSURE STATEMENT</b>							
(Use several sheets if necessary)							
Applicant: Ronald D. Blum et al.							
Filing Date: July 25, 2003				Group: 2873			
<b>U.S. PATENT DOCUMENTS</b>							
Examiner Initial*		Document Number	Date	Name	Class	Subclass	Filing Date (if appropriate)
	1	Re. 35,691	12/16/97	Theirl et al.			
	2	D 298,250	10/25/88	Kildall			
	3	D 342,063	12/7/93	Howitt et al.			
	4	D 350,342	9/6/94	Sack			
	5	2,437,642	3/9/48	Henroteau			
	6	2,576,581	11/27/51	Edwards			
	7	3,161,718	12/15/64	de Luca			
	8	3,245,315	4/12/66	Marks et al.			
	9	3,614,215	10/19/71	Mackta			
	10	3,738,734	6/12/73	Tait et al.			
	11	4,174,156	11/13/79	Glorieux			
	12	4,181,408	1/1/80	Senders			
	13	4,190,330	2/26/80	Berremman			
Examiner:				Date Considered:			
*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							

Form PTO-1449 U.S. Department of Commerce  
(Rev. 8-83) Patent and Trademark Office

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Application No.: 10/627,828

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(Use several sheets if necessary)

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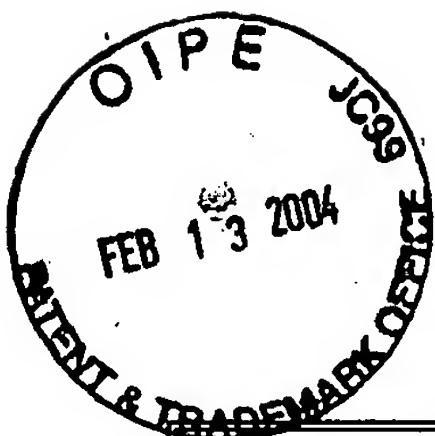
**U.S. PATENT DOCUMENTS**

Examiner Initial*		Document Number	Date	Name	Class	Subclass	Filing Date (if appropriate)
	14	4,264,154	4/28/81	Peterson			
	15	4,279,474	7/21/81	Belgorod			
	16	4,300,818	11/17/81	Schachar			
	17	4,373,218	2/15/83	Schachar			
	18	4,395,736	7/26/83	Frleux			
	19	4,418,990	12/6/83	Gerber			
	20	4,457,585	7/3/84	DuCorday			
	21	4,466,706	8/21/84	Lamothe, II			
	22	4,529,268	7/16/85	Brown			
	23	4,564,267	1/14/86	Nishimoto			
	24	4,572,616	2/25/86	Kowel et al.			
	25	4,577,928	3/25/86	Brown			
	26	4,601,545	7/22/86	Kern			
	27	4,609,824	9/2/86	Munier et al.			
	28	4,712,870	12/15/87	Robinson et al.			
	29	4,756,605	7/12/88	Okada et al.			

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IP E

Sheet 3 of 10

Form PTO-1449 U.S. Department of Commerce  
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### U.S. PATENT DOCUMENTS

Examiner Initial*		Document Number	Date	Name	Class	Subclass	Filing Date (if appropriate)
	30	4,772,094	9/20/88	Sheiman			
	31	4,795,248	1/3/89	Okada et al.			
	32	4,818,095	4/4/89	Takeuchi			
	33	4,836,652	6/6/89	Oishi et al.			
	34	4,880,300	11/14/89	Payner et al.			
	35	4,904,063	2/27/90	Okada et al.			
	36	4,907,860	3/13/90	Noble			
	37	4,919,520	4/24/90	Okada et al.			
	38	4,927,241	5/22/90	Kuijk			
	39	4,929,865	5/29/90	Blum			
	40	4,930,884	6/5/90	Tichenor et al.			
	41	4,945,242	7/31/90	Berger et al.			
	42	4,952,788	8/28/90	Berger et al.			
	43	4,958,907	9/25/90	Davis			

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Examiner Initial*		Document Number	Date	Name	Class	Subclass	Filing Date (if appropriate)
	44	4,961,639	10/9/90	Lazarus			
	45	4,968,127	11/6/90	Russell et al.			
	46	4,981,342	1/1/91	Fiala			
	47	4,991,951	2/12/91	Mizuno et al.			
	48	5,015,086	5/14/91	Okaue et al.			
	49	5,030,882	7/9/91	Solero			
	50	5,066,301	11/19/91	Wiley			
	51	5,073,021	12/17/91	Marron			
	52	5,076,665	12/31/91	Petersen			
	53	5,091,801	2/25/92	Ebstein			
	54	5,108,169	4/28/92	Mandell			
	55	5,130,856	7/14/92	Tichenor et al.			
	56	5,142,411	8/25/92	Fiala			
	57	5,171,266	12/15/92	Wiley et al.			
	58	5,182,585	1/26/93	Stoner			

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	59	5,184,156	2/2/93	Black et al.			
	60	5,200,859	4/6/93	Payner et al.			
	61	5,208,688	5/4/93	Ferguson et al.			
	62	5,229,885	7/20/93	Quaglia			
	63	5,239,412	8/24/93	Naka et al.			
	64	5,306,926	4/26/94	Yonemoto			
	65	5,324,930	6/28/94	Jech, Jr.			
	66	5,352,886	10/4/94	Kane			
	67	5,359,444	10/25/94	Piosenka et al.			
	68	5,375,006	12/20/94	Haas			
	69	5,382,986	1/17/95	Black et al.			
	70	5,440,357	8/8/95	Quaglia			
	71	5,443,506	8/22/95	Gurabet			
	72	5,451,766	9/19/95	Van Berkel			
	73	5,488,439	1/30/96	Weltmann			

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Examiner Initial*		Document Number	Date	Name	Class	Subclass	Filing Date (if appropriate)
	74	5,522,323	6/4/96	Richard			
	75	5,608,567	3/4/97	Grupp			
	76	5,615,588	4/1/97	Gottschald			
	77	5,654,786	8/5/97	Bylander			
	78	5,712,721	1/27/98	Large			
	79	5,728,155	3/17/98	Anello et al.			
	80	5,739,959	4/14/98	Quaglia			
	81	5,777,719	7/7/98	Williams et al.			
	82	5,815,233	9/29/98	Morokawa et al.			
	83	5,861,936	1/19/99	Sorenson			
	84	5,900,720	5/4/99	Kallman et al.			
	85	5,949,521	9/7/99	Williams et al.			
	86	5,980,037	11/9/99	Conway			
	87	6,325,508	12/4/01	Decreton et al.			

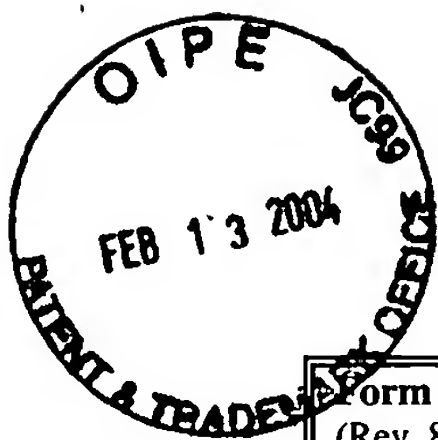
**FOREIGN PATENT DOCUMENTS**

		Document Number	Date	Country	Class	Subclass	<u>Translation</u>	
							Yes	No
	1	WO 98/27863	7/2/98	WIPO				X
	2	0 154 962 A2	9/18/85	EPO				X

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		Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No
	3	0 233 104 A1	8/19/87	EPO			(Abstract)	
	4	0 237 365 A1	9/16/87	EPO			(Abstract)	
	5	1-237610	9/22/89	Japan			(Abstract)	
	6	2169417A	7/09/86	UK			X	
	7	2170613A	8/6/86	UK			X	
	8	55-076323	6/9/80	Japan			(Abstract)	

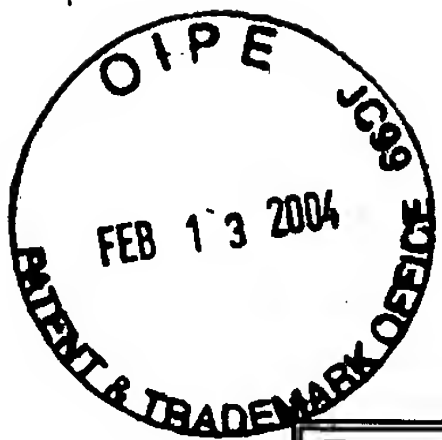
Examiner  
Initial\***OTHER DOCUMENTS** (Including Author, Title, Date, Pertinent Pages, Etc.)

	1	"Focusing by Electrical Modulation of Refraction in a Liquid Crystal Cell"; Stephen T. Kowel et al., <i>Applied Optics</i> , Vol. 23, No. 2, January 15, 1984, pp. 278-289
	2	"Computer Vision Syndrome - The Eyestrain Epidemic"; Robert A. Davis, O.D., <i>Review of Optometry</i> , September 15, 1997, pp. 80-88
	3	"The Use of Yoked Base-Up and Base-In Prism for Reducing Eye Strain at the Computer"; Stuart M. Lazarus, O.D., <i>Journal of the American Optometric Association</i> , April 1996, pp. 204-208
	4	<i>Eyecare Business</i> , October 1997 (entire issue)
	5	"Vision Through a Liquid-Crystal Spatial Light Modulator"; Larry N. Thibos et al., <i>Inpress</i> , Adaptive Optics Conference, Durham, United Kingdom, 1999
	6	"Requirements for Segmented Spatial Light Modulators for Diffraction-Limited Imaging Through Aberrated Eyes"; Larry N. Thibos et al., <i>Inpress</i> , Adaptive Optics Conference, Durham, United Kingdom, 1999
	7	"Use of Liquid-Crystal Adaptive-Optics to Alter the Refractive State of the Eye"; Larry N. Thibos et al., <i>Optometry and Vision Science</i> , Vol. 74, No. 7, July 1997
	8	"Electronic Spectacles for the 21 <sup>st</sup> Century", <i>Indiana Journal of Optometry</i> , Vol. 2, No. 1, 1999
	9	"Profile: Larry N. Thibos, Ph.D. and Donald Miller, Ph.D.", <i>Indiana Journal of Optometry</i> , Vol. 2, No. 1, pp. 5-10, 1999

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Filing Date: July 25, 2003

Group: 2873

**U.S. PATENT DOCUMENTS**

Examiner Initial*		Document Number	Date	Name	Class	Subclass	Filing Date (if appropriate)
	1	4,787,733	11/29/88	Silva			
	2	4,919,520	04/24/90	Okada et al.			
	3	5,050,981	09/24/91	Roffman			
	4	5,114,628	05/19/92	Höfer et al.			
	5	5,682,223	10/28/97	Menezes et al.			
	6	5,712,721	01/27/98	Large			
	7	5,815,239	09/29/98	Chapman et al.			
	8	5,953,098	09/14/99	Lieberman et al.			
	9	6,086,204	07/11/00	Magnante			
	10	6,095,651	08/01/00	Williams et al.			
	11	6,145,987	11/14/00	Baude et al.			
	12	6,305,802	10/23/01	Roffman et al.			
	13	6,554,425	04/29/03	Roffman et al.			

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	Applicant: Ronald D. Blum et al.	
	Filing Date: July 25, 2003	Group: 2873

**U.S. PATENT DOCUMENTS**

Examiner Initial*		Document Number	Date	Name	Class	Subclass	Filing Date (if appropriate)
	14	6,609,794	08/26/03	Levine			
	15	6,616,275	09/09/03	Dick et al.			
	16	6,616,279	09/09/03	Davis et al.			
	17	6,631,001	10/07/03	Kuiseko			

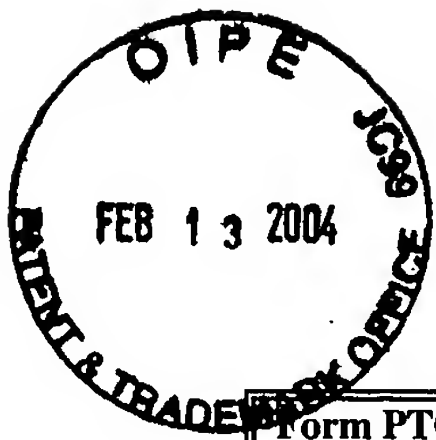
**FOREIGN PATENT DOCUMENTS**

		Document Number	Date	Country	Class	Subclass	<u>Translation</u> Yes No
	1	10366043	12/09/98	JP			X
	2	PCT/US91/04976	07/15/91	PCT			
	3	PCT/US97/21688	11/21/97	PCT			

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							Yes	No

Examiner  
Initial\***OTHER DOCUMENTS** (Including Author, Title, Date, Pertinent Pages, Etc.)

	1	"Control Optimization of Spherical Modal Liquid Crystal Lenses"; A. F. Naumov and G. D. Love, <i>Optics Express</i> , Vol. 4, No. 9, April 26, 1999, pp. 344-352
	2	"Liquid Crystal Adaptive Lenses with Modal Control"; A. F. Naumov and M. Yu Loktev, <i>Optics Letters</i> , Vol. 23, No. 13, July 1, 1998, pp. 992-994
	3	"Liquid Lenses Eye Commercial Breakthrough" (Internet Article under "Optics.org"); from <i>Opto &amp; Laser</i> , November 2003

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